



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,236	03/01/2002	Francois J. Biais	GP-301619	6954

7590 07/25/2002

CHRISTOPHER DEVRIES  
General Motors Corporation  
Legal Staff, Mail Code 482-C23-B21  
P.O. Box 300  
Detroit, MI 48265-3000

EXAMINER

MOHANDESI, IRAJ A

ART UNIT	PAPER NUMBER
----------	--------------

2834

DATE MAILED: 07/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/087,236

Applicant(s)

BIAIS ET AL.

Examiner

Iraj A Mohandesi

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-14 is/are rejected.
- 7) ☒ Claim(s) 8 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 02 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following intentions required less than 35 U.S.C. 121:

I. Claims 1-9 and 10-14 drawn to rotary dynamoelectric machine.

Classified in class 310, subclass 156.53.

II. Claims 15-16 drawn to method of fabricating a rotor classified in

Class 29, subclass 596.

Inventions Group I and Group II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made by other materially different process, such as the magnets can be pre made and pre magnetized rather than injection molding and post magnetization.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for group 1-9 and 10-14 is not required for group 15-16, restriction for examination purposes as indicated is proper.

2. During a telephone conversation with Mr. Christopher Devries registration No. 44654 on July 15, 2002 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-14. Affirmation of this election must be made by applicant in replying to this Office action. Claims 15-16 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Specification***

3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### **DETAILED ACTION**

#### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2,3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2,3 are vague and indefinite because it is unclear whether the applicant is claiming an apparatus or a method of making an apparatus. The preamble indicates the invention is motor apparatus, but the claim limitations "said high energy magnets require a magnetizing field for more than 2000KA/mm to magnetize" are method of

Art Unit: 2834

making limitations. In order to advance prosecution on the merits, the examiner has considered these claims as "product by process claims" As a product by a process claim " even though the product-by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability Of the product dose not depend of its method of production. If the product in the product By process claim is the same of obvios from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process" In re Thorp, 777 F. 2d 695,698,227 USPQ 964,966 (Fed. Cir. 1985).

5. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 is vague and indianite because the limitation " the electric traction motor of claim 9 ,wherein said high energy and low energy magnets include a polymer" is depending on claim 9 itself.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5,7,10,11,13,14 rejected under 35 U.S.C. 102(b) as being anticipated by

**Narita US patent 6,177,745.**

**Narita,745** discloses an electric motor comprising a wound stator (16, Fig.1), a rotor magnetically interacting with said wound stator (0, Fig.1), high energy magnets configured in the rotor and low energy magnets configured in the rotor (11, 12 Fig.1 column 2, line 60-63, column 1, line 56-62), the high energy magnets are configured in positions proximate the surface of the rotor (11, Fig.1), wherein the low energy magnets are configured below the high energy magnets in the rotor (Fig. 1 the 12 has closer distance to the rotor than the high energy magnets 11), the low energy magnets comprise ferrite (column 2, line 60), the rotor includes an array of cavities (the area where the magnets are embedded Fig.1), a first magnetic material configured in a portion of said array cavities, and a second magnetic material configured in a portion of said array cavities (11, 12, Fig. 1), wherein the first magnetic material is a high energy magnetic material, and the second magnetic material is a low energy magnetic material (11, 12, Fig. column 2, line 60-63, column 1, line 56-62), the second material is ferrite (column 2, line 60),

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Narita,745**

In view of **Rahman US patent 5,187,401**.

**Narita,745** discloses an electric motor comprising a wound stator (16, Fig.1), a rotor magnetically interacting with said wound stator (0, Fig.1), high energy magnets configured in the rotor and low energy magnets configured in the rotor (11, 12 Fig.1 column 2, line 60-63, column 1, line 56-62), the high energy magnets are configured in positions proximate the surface of the rotor (11, Fig.1), wherein the low energy magnets are configured below the high energy magnets in the rotor (Fig. 1 the 12 has closer distance to the rotor than the high energy magnets 11), the low energy magnets comprise ferrite (column 2, line 60), the rotor includes an array of cavities (the area where the magnets are embedded Fig.1), a first magnetic material configured in a portion of said array cavities, and a second magnetic material configured in a portion of said array cavities (11, 12, Fig. 1), wherein the first magnetic material is a high energy magnetic material, and the second magnetic material is a low energy magnetic material (11, 12, Fig. column 2, line 60-63, column 1, line 56-62), the second material is ferrite (column 2, line 60).

However **Narita,745** fails to teach an electric motor with a rotor wherein the high energy magnets comprise Nd Fe B.

**Rahman'401** discloses an electric motor with a rotor wherein the high energy magnets comprise NdFeB. (neodymium-boron-iron).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine **Narita,745** motor with a NdFeB magnet in the rotor to increase the magnetic field intensity.



Art Unit: 2834

***Allowable Subject Matter***

8. Claims 8,9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

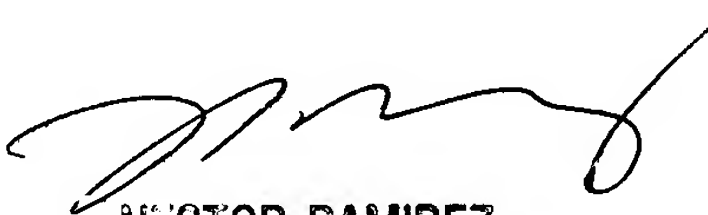
***Communication***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Iraj A Mohandesi whose telephone number is (703)305-3242. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-0377.

I.M  
July 18, 2002

  
NESTOR RAMIREZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800